SUGGESTIONS FOR SUCCESS IN GENETICS

For many students, genetics is among the more challenging courses in their undergraduate education. There are many reasons for this, but in my experience three stand out.

1. Genetics differs from many biology courses in that it is quantitative. Not only are students expected to understand the concepts of genetics but in many cases they are asked to demonstrate their understanding in a quantitative way, including the use of statistics.

2. Genetics is comprehensive, encompassing classical genetics, cytogenetics, molecular genetics, population genetics and everything in between. Students are expected to be proficient in each of these areas. The knowledge gained in genetics is cumulative: concepts discussed during the first week of the semester will remain germane during the last week of the semester.

3. Problem solving is an important part of genetics. It is not possible to simply memorize the concepts of genetics and then reiterate them to answer an exam question. To succeed in genetics it is necessary to synthesize various ideas learned throughout the course and then to use this knowledge to answer a particular question.

Rather than perceiving these features as potential impediments, consider the skills you will have acquired after completing a course in genetics:

- You will enhance your ability to think quantitatively.
- You will have a comprehensive knowledge of the most important biological science.
- You will gain experience with synthetic thinking and problem solving.

These are precisely the skills that are needed for success in graduate or professional school, or for a fulfilling career.

Here are some suggestions for success in genetics:

• Read the textbook before coming to class. The reading assignments for the entire semester are available the first day of class. Take advantage of this to familiarize yourself with the material before we discuss it in class.

• Attend class every day. While the text is an excellent resource, it presents things in a sequential manner without emphasis. During class we are able to cover topics in a manner consistent with student understanding. We will also consider specific examples of current research in genetics. Remember that the material covered on the exams is the material covered in class.

• Develop a realistic study schedule. Cramming is not a successful strategy to prepare for an exam in a challenging discipline like genetics. Generally, you will need to spend six to eight hours outside of class each week studying for genetics.

• Work and understand the assigned problems. Most of the exam questions are similar to those found at the end of each chapter of the textbook. It is vital to your success that you understand each problem, as well as the concept illustrated by the problem.

• If you are having trouble, seek help. I am available any time to help you with difficulties understanding the topics or problems. I am committed to your success in genetics.